WHAT IS CLAIMED IS:

1. A high-frequency-corresponding simulation apparatus comprising:

an element setting unit which sets a plurality of elements corresponding to wiring patterns in accordance with circuit design information;

a resistance-value calculation unit which calculates the total of resistance values each of which is the sum of the DC resistance value and skin resistance value of each of the elements as the total resistance value;

a first determination unit which determines whether the total resistance value is less than a first threshold value;

a sorting unit which sorts resistance values corresponding to the elements when the total resistance value is equal to or larger than the first threshold value in accordance with a determination result by said first determination unit;

a second determination unit which integrates the resistance values starting with a resistance value having the smallest high-frequency element delay and determines whether the integration result reaches a value immediately before a second threshold value whenever the integration is executed; and

an analysis unit which executes an analysis by using

an element corresponding to an integrated resistance value as a RLC model and elements other than the element as high-frequency element models when said second determination unit determines that the integration result reaches the value immediately before the second threshold value.

2. The high-frequency-corresponding simulation apparatus according to claim 1, wherein said analysis unit executes an analysis by using all elements as RLC models when the total resistance value is less than the first threshold value.

3. The high-frequency-corresponding simulation apparatus according to claim 1, wherein said analysis unit superimposes a skin resistance value on a DC resistance value of a RLC model.

4. The high-frequency-corresponding simulation apparatus according to claim 1, further comprising a setting change unit which changes the value of the second threshold value.

5. The high-frequency-corresponding simulation apparatus according to claim 4, wherein said setting change unit also changes the value of a skin resistance value to be superimposed on the DC resistance value.

6. The high-frequency-corresponding simulation apparatus according to claim 1, wherein said circuit is constituted of a plurality of substrates.

7. A high-frequency-corresponding simulation method comprising the steps of:

setting a plurality of elements corresponding to wiring patterns in accordance with circuit design information;

calculating the total of resistance values each of which is the sum of the DC resistance value and skin resistance value of each of the elements as the total resistance value;

determining whether the total resistance value is less than a first threshold value;

sorting resistance values corresponding to the elements by using a high-frequency element delay as a key when it is determined that the total resistance value is equal to or larger than the first threshold value;

integrating the resistance values starting with a resistance value having the smallest high-frequency element

delay;

determining whether the result of integration reaches a value immediately before a second threshold value whenever the integration is executed; and

executing an analysis by using an element corresponding to an integrated resistance value as a RLC model and elements other than the element as high-frequency element models when it is determined that the integration result reaches the value immediately before the second threshold value.

8. A computer-readable recording medium which stores a computer program which when executed on a computer realizes the steps of:

setting a plurality of elements corresponding to wiring patterns in accordance with circuit design information;

calculating the total of resistance values each of which is the sum of the DC resistance value and skin resistance value of each of the elements as the total resistance value;

determining whether the total resistance value is less than a first threshold value;

sorting resistance values corresponding to the elements by using a high-frequency element delay as a key when it is determined that the total resistance value is

equal to or larger than the first threshold value;

integrating the resistance values starting with a resistance value having the smallest high-frequency element delay;

determining whether the result of integration reaches a value immediately before a second threshold value whenever the integration is executed; and

executing an analysis by using an element corresponding to an integrated resistance value as a RLC model and elements other than the element as high-frequency element models when it is determined that the integration result reaches the value immediately before the second threshold value.

9. A computer program which when executed on a computer realizes the steps of:

setting a plurality of elements corresponding to wiring patterns in accordance with circuit design information;

calculating the total of resistance values each of which is the sum of the DC resistance value and skin resistance value of each of the elements as the total resistance value;

determining whether the total resistance value is less than a first threshold value;

sorting resistance values corresponding to the

elements by using a high-frequency element delay as a key when it is determined that the total resistance value is equal to or larger than the first threshold value;

integrating the resistance values starting with a resistance value having the smallest high-frequency element delay;

determining whether the result of integration reaches a value immediately before a second threshold value whenever the integration is executed; and

executing an analysis by using an element corresponding to an integrated resistance value as a RLC model and elements other than the element as high-frequency element models when it is determined that the integration result reaches the value immediately before the second threshold value.